

REMARKS

Status of the Claims

Claims 1-11, 14-22, 27 and 28 were pending.

Claims 1-11, 14-22, 27 and 28 were rejected.

Please **amend** claims 1, 14, and **cancel** claims 3, 27, 28.

It is believed that the remarks laid out herein below attend to all rejections and further issues raised in the pending office action dated 24 August 2007.

Claim Rejections

Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-11 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Zhang (US 2002/0061729) in view of Uesugi (US 6,804,491).

Amended claim 1 is directed to a wireless access node that includes the following features:

- a first radio operable to transmit/receive on a subset of N transmission channels, one channel at a time;

- a second radio operable to transmit/receive on another subset of the N transmission channels, a different channel at a time;

- a first filter bank of less than N filters for filtering a first transmit/receive signal of the first radio; and

- a second filter bank of less than N filters for filtering a second transmit/receive signal of the second radio, at least one of the pass-bands of the second filter bank being different than the pass-bands of the first filter bank;

- wherein N is greater than 2, and wherein the combination of the first radio and the second radio are operable to transmit/receive on all N transmission channels.

The amendments to claim 1 are supported throughout the specification. See, for example, page 8, first paragraph, Figures 3, 4, 5 and associated descriptions.

Zhang

Describes a processor unit with two system buses: bus1 and bus2, which multiple wireless networking radio units and multiple wired networking units that can be connected to. The number and type of wireless radio units and wired networking units can be selected and installed according to specific network requirements.

Uesugi

Teaches a system that includes a base station that transmits at frequencies of F1, F2, F3 and repeaters provided with filters passing only F1 are placed. According to this configuration, repeater apparatus causes only F1 to be passed to reach in the distance so as to enlarge cells according to only specific channel (frequency F1).

Applicants disagree with the Examiner's rejection for the following reasons:

1. The claimed invention includes an access node that includes the first radio and the second radio, wherein the combination of the first radio and the second radio are operable to transmit/receive on all N transmission channels. Zhang does not include the filtering of subsets of the N frequency channels, and Uesugi includes a subset of frequency channels for both the radios and the filters. It is not obvious include filtering of a subset of channels of radios within Zhang and still receive/transmit on all N transmission frequencies.

2. The claimed access node additionally includes the first filter bank and the second filter bank, and therefore, the combination of the first filter band and the second filter bank have filters corresponding to each of the N transmission channels. None of the cited references include combinations of filter banks in which each filter band includes filtering of a different subset of transmission channels, and wherein the combined filter banks provide filtering of each of the N transmission frequencies.

3. The combination of radios and filters as claimed allows for a reduced number of filters when the access node is used within a mesh network that allows the radios transmissions to be reversible. The cited references require radios operable at all of the desired transmission frequencies, and filters at all of the *desired* transmission frequencies. None of the cited reference provides any teachings of operating the access node in reverse modes which can allow the access nodes as claimed which provides improved filtering, and reduced number of filters.

4. The combination of radios and filters as claimed effectively allows an extension of the coverage with a reduced number of filters. The frequency extender of Uesugi is only for a subset of the transmission channels. To provide the full range of transmission channel extension, Uesugi would require a filter for each of the transmission channels.

5. The access node per claims 5 and 20 includes the radios being reversible (or can be rotated) which can be influenced by routing selections of the access node. None of the cited references include the radios each having a subset of the total number of transmission channels, but the access node capable of transmitting/receiving over all of the transmission channels, which can influence the transmission directions of the access nodes.

Claims 1 and 14 are patentable over the cited references. Claims 2, 4-13 are directly or indirectly dependent on claim 1. Therefore, claims 2, 4-13 are patentable over the cited references as well.

Claims 14-22, were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Zhang (US 2002/0061729) in view of Uesugi (US 6,804,491) and Bandeira et al. (US2002/0072329).

Claim 14 is patentable over the cited references for the reasons described above. However, Claims 15-22 are directly or indirectly dependent on claims 14. Therefore, claims 15-22 are patentable over the cited references.

No new matter has been added by these amendments.

Applicants respectfully suggest that each of the claims presently in the application are distinct over the prior art and that the application is now in condition for allowance. Accordingly, Applicants request that the restriction/election requirement be withdrawn and the claims be allowed.

Respectfully submitted,

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